

## REMARKS

Claims 1-7 and 18-19 are presently pending in the subject application. Claims 8-17 are withdrawn. Claims 18-19 are added. Claims 1, 3, 5 and 7 are amended. Claims 1 and 3 are the independent claims.

Claims 1-2 and 5-6 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,658,472 to Ransburg. Claims 1-2 and 5-6 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,658,009 to Ransburg. Claims 3-4 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ransburg '472 or '009 in view of U.S. Patent No. 5,190,588 to Matushita et al. and U.S. Patent No. 6,096,391 to Muffoletto et al. Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over Ransburg '472 or '009 in view of U.S. Patent No. 2,759,763 to Juvinal.

### **Claims 1-2 And 5-6 Are Patentably Distinct Over The '472 Patent**

Claims 1-2 and 5-6 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,658,472 to Ransburg. The applicants submit that independent claim 1 and dependent claims 2 and 5-6 are patentably distinct from the '472 patent for several reasons.

First, claim 1, as amended, is patentably distinct over the '472 patent because the Ransburg patent does not disclose or suggest a coating material comprising a "therapeutic agent." This amended language adding "therapeutic agent" to independent claim 1 is similar to a limitation previously in dependent claim 5. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *See* MPEP 2131. The Office Action states, without more, that "[a]s to claims 5-6, in Ransburg ... the coating material is capable of containing a therapeutic agent." The Office Action does not set forth, and the applicants cannot find, where coating materials containing a therapeutic agent is described in the '472 patent. Accordingly, as it appears the '472 patent fails to disclose this feature, the amended independent claim 1 is patentably distinct from the '472 patent. *See* M.P.E.P. § 2144.03.

Second, the claims are patentably distinct over the '472 patent because the patent fails to at least disclose or suggest "a coating discharge nozzle body formed from an electrically conductive material, said nozzle having a nozzle orifice for discharging the coating material," as recited in independent claim 1. Rather, the electrostatic coating device of the '472 patent has an electrically shielded nozzle. The '472 patent discloses "a nozzle 29 having its outer end disposed close to the edge 22 of the discharge head [16] but spaced rearwardly a short distance from such edge so as to be electrically shielded thereby." *See* '472 patent, col. 3:38-42. Thus, in the '472 patent, nozzle 29 is electrically shielded from head 16.

The Office Action suggests that head 16 is the coating discharge nozzle, stating that the '472 patent discloses "a coating discharge nozzle body (head 16) formed from an electrically conductive material (see column 3, lines 7-13) ... and means (high-voltage source 17) for applying to the nozzle body a second electrical potential." *See* Office Action, pp.2-3, ¶4. However, head 16 of the '472 patent does not have "a nozzle orifice for discharging the coating material," as claimed. Rather, coating material is distributed along the wedge surface of head 16 to discharge edge 22.

Third, the claims are patentably distinct over the '472 patent because the patent fails to at least disclose or suggest "means for applying to the nozzle body a second electrical potential to electrostatically discharge the coating material from the orifice toward the target," as recited in claim 1. As described above, nozzle 29 in the electrostatic coating device of the '472 patent is electrically shielded, and head 16 cannot be a "coating discharge nozzle body" because it lacks an orifice for discharging the coating material.

Fourth, for the same reasons that amended claim 1 (adding "therapeutic agent") is patentably distinct over the '472 patent, claims 5 and 6 are also patentably distinct over the '472 patent for the independent reason that the Ransburg patent does not disclose or suggest a target as a "medical device" or a "stent," as claimed. Each element set forth in the claim must be found in any single prior art reference. *See* MPEP 2131. The Office Action states, without more, that "[a]s to claims 5-6, in Ransburg the target is capable of being a medical device including a stent." The Office Action does not set forth, and the applicants cannot find, where each of these claim elements are described in the '472 patent. Accordingly, as it appears the '472 patent fails

to disclose the features recited in claims 5 and 6, these dependent claims are patentably distinct for this separate reason as well. *See M.P.E.P. § 2144.03.*

#### **Claims 1-2 And 5-6, As Amended, Are Patentably Distinct Over The '009 Patent**

Claims 1-2 and 5-6 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,658,009, also to Ransburg. For the same reason maintained above, amended claim 1 is patentably distinct over the '472 patent, claim 1 is also patentably distinct over the '009 patent because the '009 patent does not disclose or suggest a coating material containing a "therapeutic agent." "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *See MPEP 2131.* The Office Action states, without more, that "in Ransburg ... the coating material is capable of containing a therapeutic agent." The Office Action does not set forth, and the applicants cannot find, where coating materials containing a therapeutic agent is described in the '009 patent. Accordingly, as it appears the '009 patent fails to disclose this feature, the amended independent claim 1 is patentably distinct from the '009 patent. *See M.P.E.P. § 2144.03.*

Likewise, claims 5 and 6 are patentably distinct over the '009 patent for the independent reason that the '009 patent does not disclose or suggest a target as a "medical device" or a "stent," as claimed. *See MPEP 2131.* The Office Action states that "[a]s to claims 5-6, in Ransburg the target is capable of being a medical device including a stent." As it appears the '009 patent fails to disclose these features, claims 5 and 6 are patentably distinct for this separate reason as well. *See M.P.E.P. § 2144.03.*

#### **Claims 3-4 Are Patentably Distinct Over Ransburg's '472 or '009 Patents in view of Matushita and Muffoletto**

Claims 3-4 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ransburg '472 or '009 in view of U.S. Patent No. 5,190,588 to Matushita et al. and U.S. Patent No. 6,096,391 to Muffoletto et al. Claim 3 has been amended into independent form by incorporating the limitations of original independent claim 1. The applicants submit that the claims are patentably distinct for several reasons.

First, without addressing the propriety of combining the references, applicants assert that none of the four references, alone or in combination, discloses or suggests at least the limitation of “a spark discharge voltage generator, wherein the spark discharge voltage generator is electrically connected to the target holder and generates a voltage spike sufficient to remove an oxide layer from at least one contact point of the target where the target contacts the target holder,” as recited in claim 3. As the Office Action states, neither of the primary Ransburg references, the ’472 or ’009 patents, disclose a spark discharge voltage generator. *See* Office Action, p. 5, ¶8.

Matushita does not provide the missing limitation either. Matushita regards applying a high voltage necessary for electrostatic coating of large objects such as an automobile. *See* Matushita, col. 1:28-30; Figs. 1 & 3. The Office Action maintains that Matushita “discloses (see Fig 3) a voltage generator (64) in communication with the conveyor (47).” *Id.* However, Matushita does not disclose a spark discharge voltage generator. Rather, Matushita teaches away from generating a spark discharge between voltage generator 64 and the insulated conveyer 47: “the insulated relay conveyer 47 is switchingly connected between the high voltage generator 64 and the ground so that spark discharge is not caused.” *See* Matushita, col. 9:57-62. Matsushita expressly states, in the Abstract and throughout the specification, that no spark discharge is created: “since the voltage is gradually increased ..., spark discharge is not caused.” *Id.* col. 11:2-9; *passim*.

Likewise, Muffoletto does not provide the missing limitation. The Office Action generally asserts without specific citation that “Muffoletto et al teaches a method of removing an oxide layer from a substrate by applying a voltage spike.” *See* Office Action, p. 5, ¶8. However, Muffoletto does not disclose “a spark discharge voltage generator, wherein the spark discharge voltage generator ... generates a voltage spike sufficient to remove an oxide layer,” as recited in claim 3. As Muffoletto discloses, “metal alloys have a native oxide present on the surface which is essentially insulating and must be removed or made electrically conductive if the metal alloy is to be used as an electrode.” *See* Muffoletto, col. 2:65 – col. 3:2. However, rather than removing the oxide layer, in Muffoletto “[t]he native oxide layer of the substrate is changed from electrically insulating to electrically conductive.” *See* Muffoletto, Abstract. “In other words,

native oxide layer has been converted from being essentially non-conductive, i.e. insulating, to having an increased and improved degree of electrical conductivity.” *Id.*, col. 3:36-42.

Muffoletto achieves this conversion by “depositing a small amount of [a disparate] metal” on the substrate surface by low temperature arc vapor deposition. *See* Muffoletto, Abstract. It does not disclose removing an oxide layer by voltage spike from a spark discharge voltage generator.

Second, there is no suggestion or motivation to combine the references because, as discussed above, Matsushita teaches away from generating a spark discharge: “the insulated relay conveyer 47 is switchingly connected between the high voltage generator 64 and the ground so that spark discharge is not caused.” *See* Matsushita, col. 9:57-62. Matsushita expressly states, in the Abstract and throughout the specification, that no spark discharge is created “since the voltage is gradually increased.” *Id.* col. 11:2-9. Likewise, as discussed above, Muffoletto teaches away from removing an oxide layer, and instead discloses changing the layer to be electrically conductive. *See* Muffoletto, col. 2:65 – col. 3:2; Abstract; col. 3:36-42.

In addition, there is no suggestion or motivation to combine the references because the “suggested combination would require a substantial reconstruction and redesign of the elements shown in the primary reference as well as a change in the basic principle under which the primary reference’s construction was designed to operate.” *See* MPEP 2143.01 (VI). The primary reference of Ransburg (as seen in Figures 1) discloses grounding the conveyer—not applying a voltage spike from a spark discharge voltage generator. Modifying Ransburg to add a spark discharge voltage generator would require substantial redesign as well as a change the basic operation of the primary reference. Thus, for this separate reason, there is no suggestion or motivation to combine the references.

#### **Claim 7 is Patentably Distinct Over Ransburg’s ’472 or ’009 Patents in view of Juvinall**

Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over Ransburg ’472 or ’009 in view of U.S. Patent No. 2,759,763 to Juvinall. Claim 7 has been amended to depend from claim 2 and to add the limitation of “wherein the fluid passageway is adapted to create a high velocity fluid annulus surrounding the nozzle orifice to enhance coating atomization” to

distinguish the “coating material conduit” and “fluid passageway” structures. Support for the amended language can be found in paragraph [0025] of the application.

The Office Action relies on Figs. 5 and 6 of the Juvinal reference for “a pressurized fluid source (58) in communication with a nozzle (head 40) through passageway (52).” *See* Office Action, p. 6, ¶9. However, the applicants respectfully submit that the Juvinal reference does not disclose a distinct passageway structure “adapted to create a high velocity fluid annulus surrounding the nozzle orifice,” as recited in the amended claim. Rather, Juvinal discloses a device in which “air under pressure may be introduced into passageway 48 and port 49, thus expanding diaphragm 50 and causing it to move into coating-terminating position by contact with face 42a as shown in Figure 5.” *See* Juvinal, col. 5:71 – 6:2. “When it is desired to temporarily but immediately terminate coating, air valve 57 is opened to permit air under high pressure to flow through air line 52 … into passageway 48 and port 49. The air pressure is maintained so that in port 49 the pressure is substantially greater than the liquid pressure existing in narrow passageway 47 and, therefore, the air pressure will expand diaphragm 50 outwardly into passageway 47 and against face 42a, thus causing substantial instantaneous termination of the coating discharge.” *See* Juvinal, col. 6:14-23. In other words, Juvinal discloses using air pressure to seal the coating passageway and terminate coating discharge.

### **Claims 18-19 Are New Claims**

Claims 18 and 19 are new claims dependent upon claim 3, which has been amended into independent form. Since claim 3 is believed to be in condition for allowance for the reasons stated above, Applicants submit that claims 18 and 19 are patentably distinct over the cited references.

Although no fees are believed to be due, the Commissioner is hereby authorized to charge Kenyon & Kenyon Deposit Account No. 11-0600 for any applicable fee.

Should there be any questions concerning this matter, the Examiner is invited to contact the Applicant's undersigned attorney.

Respectfully submitted,

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